Manage storage ports

REST API reference

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Manage storage ports

Storage ports endpoint overview

Retrieving storage port information

The storage port GET API retrieves all of the storage ports in the cluster.

Examples

1) Retrieve a list of storage ports from the cluster

The following example shows the response with a list of storage ports in the cluster:

```
# The API:
/api/storage/ports

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/ports" -H "accept:
application/hal+json"

# The response:
{
"records": [
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0a",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0a"
      }
    }
  },
```

```
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0b",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0b"
      }
    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0c",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0c"
      }
    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
```

```
        }
      }
    },
    "name": "0d",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0d"
      }
    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0e",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0e"
      }
    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0f",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0f"
```

```
      }
    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
        }
      }
    },
    "name": "0g",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0g"
      }
    }
  },
],
"num_records": 7,
"_links": {
  "self": {
    "href": "/api/storage/ports"
  }
}
}
```

2) Retrieve a specific storage port from the cluster

The following example shows the response of the requested storage port. If there is no storage port with the requested node uuid and name, an error is returned.

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0a" -H "accept: application/hal+json"

# The response:
{
"node": {
  "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
  "name": "node-1",
  "_links": {
    "self": {
      "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
    }
  }
},
"name": "0a",
"description": "SAS Host Adapter 0a (PMC-Sierra PM8001 rev. C)",
"wwn": "500a098003633df0",
"speed": 6,
"cable": {
  "part_number": "112-00429+A0",
  "serial_number": "629230774",
  "identifier": "500a0980066e2c01-500a098003633df0",
  "length": "0.5m"
},
"state": "online",
"enabled": true,
"firmware_version": "01.12.09.00",
"type": "sas",
"redundant": true,
"in_use": true,
"_links": {
  "self": {
    "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0a"
  }
}
}
```

Updating a storage port

The storage port PATCH API modifies the port mode for storage/network use and allows the port to be enabled/disabled.

Examples

1) Using an Ethernet port for storage

The following example sets an Ethernet port mode for storage use:

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-
907f-00a0985a72ee/e3a" -H "accept: application/hal+json" -H "Content-Type:
application/hal_json" -d '{"mode": "storage"}'

# The response:
{
}
```

2) Disabling a storage port

The following example disables an unused storage port:

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-
907f-00a0985a72ee/e3a" -H "accept: application/hal+json" -H "Content-Type:
application/hal_json" -d '{"enabled": "false"}'

# The response:
{
}
```

Retrieve storage ports

GET `/storage/ports`

Introduced In: 9.6

Retrieves a collection of storage ports.

Related ONTAP commands

- `storage port show`

Learn more

- DOC /storage/ports

Parameters

Name	Type	In	Required	Description
mode	string	query	False	Filter by mode • Introduced in: 9.8
name	string	query	False	Filter by name
enabled	boolean	query	False	Filter by enabled • Introduced in: 9.9
speed	number	query	False	Filter by speed
board_name	string	query	False	Filter by board_name
state	string	query	False	Filter by state
serial_number	string	query	False	Filter by serial_number
part_number	string	query	False	Filter by part_number
error.message	string	query	False	Filter by error.message

Name	Type	In	Required	Description
error.corrective_action	string	query	False	Filter by error.corrective_action
mac_address	string	query	False	Filter by mac_address
type	string	query	False	Filter by type • Introduced in: 9.9
cable.length	string	query	False	Filter by cable.length
cable.identifier	string	query	False	Filter by cable.identifier
cable.part_number	string	query	False	Filter by cable.part_number
cable.serial_number	string	query	False	Filter by cable.serial_number
in_use	boolean	query	False	Filter by in_use • Introduced in: 9.9
redundant	boolean	query	False	Filter by redundant • Introduced in: 9.9
node.uuid	string	query	False	Filter by node.uuid
node.name	string	query	False	Filter by node.name
wwpn	string	query	False	Filter by wwpn • Introduced in: 9.9
firmware_version	string	query	False	Filter by firmware_version • Introduced in: 9.9

Name	Type	In	Required	Description
wwn	string	query	False	Filter by wwn
description	string	query	False	Filter by description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[storage_port]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "board_name": "string",
      "cable": {
        "identifier": "500a0980000b6c3f-50000d1703544b80",
        "length": "2m",
        "part_number": "112-00431+A0",
        "serial_number": "616930439"
      },
      "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
      "error": {
        "corrective_action": "string",
        "message": "string"
      },
      "firmware_version": "03.08.09.00",
      "mac_address": "string",
      "mode": "storage",
      "name": "2a",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "part_number": "111-03801",
      "serial_number": "7A2463CC45B",
      "speed": "6",
      "state": "online",
      "type": "sas",
      "wwn": "50000d1703544b80",
      "wwpn": "string"
    }
```

```
  ]
}
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

storage_port

Name	Type	Description
board_name	string	
cable	cable	
description	string	
enabled	boolean	
error	error	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	node	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a storage port

GET `/storage/ports/{node.uuid}/{name}`

Introduced In: 9.6

Retrieves a specific storage port.

Related ONTAP commands

- `storage port show`

Learn more

- DOC /storage/ports

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID
name	string	path	True	Port name
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
board_name	string	

Name	Type	Description
cable	cable	
description	string	
enabled	boolean	
error	error	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	node	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

Example response


```
{
  "board_name": "string",
  "cable": {
    "identifier": "500a0980000b6c3f-50000d1703544b80",
    "length": "2m",
    "part_number": "112-00431+A0",
    "serial_number": "616930439"
  },
  "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
  "error": {
    "corrective_action": "string",
    "message": "string"
  },
  "firmware_version": "03.08.09.00",
  "mac_address": "string",
  "mode": "storage",
  "name": "2a",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "part_number": "111-03801",
  "serial_number": "7A2463CC45B",
  "speed": "6",
  "state": "online",
  "type": "sas",
  "wwn": "50000d1703544b80",
  "wwpn": "string"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update a storage port

PATCH `/storage/ports/{node.uuid}/{name}`

Introduced In: 9.11

Updates a storage port.

Related ONTAP commands

- `storage port modify`
- `storage port enable`
- `storage port disable`

Learn more

- DOC /storage/ports

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID
name	string	path	True	Port name

Request Body

Name	Type	Description
board_name	string	
description	string	
enabled	boolean	
firmware_version	string	

Name	Type	Description
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	node	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

Example request


```
{
  "board_name": "string",
  "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
  "firmware_version": "03.08.09.00",
  "mac_address": "string",
  "mode": "storage",
  "name": "2a",
  "node": {
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "part_number": "111-03801",
  "serial_number": "7A2463CC45B",
  "speed": "6",
  "state": "online",
  "type": "sas",
  "wwn": "50000d1703544b80",
  "wwpn": "string"
}
```


Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
17891328	Port operation "<operation>\" failed on port \"<name>\". This might indicate a hardware error, an illegal request, or an aborted command.</name></operation>
17891329	Port "<name>\" is invalid.</name>
17891330	Port operation "<operation>\" failed on port \"<port>\" because it is not supported on this port type.</port></operation>

Error Code	Description
17891331	Cannot complete operation on port "<port>\". The status of the port is not available.</port>
17891332	Port operation "<operation>\" failed on port \"<port>\". The port is not offline.</port></operation>
17891333	Port operation "<operation>\" failed on port \"<port>\". The port is already offline.</port></operation>
17891334	Port operation "<operation>\" failed on port \"<port>\". One or more devices on the port is currently being sanitized.</port></operation>
17891338	Device operation "<operation>\" failed on port \"<name>\". Some devices can only be accessed through this port. Disabling this port might cause multiple device failures.</name></operation>
17891339	Device operation "<operation>\" failed on port \"<name>\". Some devices can only be accessed through this port. Disabling this port might cause multiple device failures. Use the \"-force\" parameter to ignore checks and <operation>the port.</operation></name></operation>
17891344	Device operation "<operation>\" failed on port \"<name>\" because the port is in use.</name></operation>
17891345	Device operation "<operation>\" failed on port \"<name>\" because the port is in use. Use the \"-force\" parameter to ignore checks and <operation>the port.</operation></name></operation>
17891346	Port "<name>\" is already enabled.</name>
17891347	Port "<name>\" is already disabled.</name>
17891350	Port "<name>\" is not a valid storage Ethernet port.</name>
17891350	Port "<port>\" is not a valid storage Ethernet port.</port>
17891352	Port operation "<operation>\" failed on port \"<name>\". Reboot node \"<node>\" to recover.</node></name></operation>
17891353	Unable to enable port "<port>\" because it is in network mode.</port>
17891354	Unable to disable port "<port>\" because it is in network mode.</port>
17891355	Port operation "<operation>\" failed on port \"<name>\" because it is not supported on dedicated ports.</name></operation>

Error Code	Description
17891356	Unable to <operation>port \"<port>\" when setting mode to \"<mode>\".</mode></port></operation>

Definitions

See Definitions

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

href

Name	Type	Description
href	string	

_links

node

Name	Type	Description
name	string	
uuid	string	

storage_port

Name	Type	Description
board_name	string	
description	string	
enabled	boolean	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	

Name	Type	Description
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	node	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

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